

CLAIMS:

1. A method for controlling power output of a radio frequency transmitter, wherein information relating to statistical variations in the amplitude of the information signal that is to be transmitted is used to control a gain value of the radio frequency transmitter.

2. A method for controlling power output of a radio frequency transmitter, the method comprising:
detecting output power from the radio frequency transmitter for a first data burst thereby to produce a detected power control signal;

calculating or measuring an expected mean power level for an output signal for the first data burst;

calculating a difference between the expected mean power level and a reference mean power level, and producing a calculated power control signal from the said difference and a nominal power level;

comparing the calculated power control signal with the detected power control signal to produce a gain control signal; and

supplying the gain power control signal to the radio frequency transmitter, thereby to adjust the gain thereof for at least one data burst subsequent to the first data burst.

3. A method as claimed in claim 2, wherein the detected power control signal is produced by the steps of:

measuring the output signal of the radio frequency transmitter, thereby to produce a measured power level signal;

attenuating the measured power level signal; and producing a detected power control signal which is proportional to the attenuated measured power level.

4. A method as claimed in claim 3, wherein the measured power level signal is attenuated by an amount proportional to the nominal power level.

5. Apparatus for controlling an output power of a radio frequency transmitter, comprising:

a detector operable to detect an output signal of a radio frequency transmitter and to produce a detected power signal indicative of the power of the output signal, the output signal relating to a first output data burst from the transmitter;

a device for calculating or measuring an expected mean power level relating to the first output data burst from the transmitter;

a power level calculation unit operable to obtain a difference between the expected mean power level and a reference power level, and to produce a calculated power control signal from the said difference and a nominal power level; and

a gain control unit for comparing the power control signal with the detected power level signal to produce a gain control signal for supply to the transmitter for at least one data burst subsequent to the first data burst.

6. Apparatus as claimed in claim 5, further comprising:

an attenuator connected to receive the output signal from the radio frequency transmitter and operable to output an attenuated signal to the detector.

7. Apparatus as claimed in claim 6, wherein the attenuator is operable to attenuate the output signal by an amount which is proportional to the nominal power level.

8. A radio frequency transmitter comprising:

a waveform generator operable to produce a

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waveform signal from input data;

radio frequency circuitry connected to receive the waveform signal and operable to output a radio frequency signal, the circuitry including an amplifier having variable gain;

a detector operable to detect an output signal of a radio frequency transmitter and to produce a detected power signal indicative of the power of the output signal, the output signal relating to a first output data burst from the transmitter;

a device for calculating or measuring an expected mean power level relating to the first output data burst from the transmitter;

a power level calculation unit operable to obtain a difference between the expected mean power level and a reference power level, and to produce a calculated power control signal from the said difference and a nominal power level; and

a gain control unit for comparing the power control signal with the detected power level signal to produce a gain control signal for supply to the transmitter for at least one data burst subsequent to the first data burst.

9. A transmitter as claimed in claim 8, further comprising:

an attenuator connected to receive the output signal from the radio frequency transmitter and operable to output an attenuated signal to the detector.

10. A transmitter as claimed in claim 9, wherein the attenuator is operable to attenuate the output signal by an amount which is proportional to the nominal power level.